

CLAIMS

1. A method of controlling wireless network operations associated with a flow control process which terminates data communication to a mobile station based on an out-of-coverage condition between the mobile station and a wireless communication network, the method comprising the acts of:

identifying an indication which indicates whether a mobile station utilizes an always-on connection for a data service provided through the wireless communication network;

10 causing the flow control process to be bypassed for the mobile station based
on the indication indicating that the mobile station utilizes the always-on connection;
and

otherwise, causing the flow control process to be performed for the mobile station.

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2. The method of claim 1, wherein the always-on connection comprises a Point-to-Point Protocol (PPP) session.

3. The method of claim 1, wherein the always-on connection is utilized
20 for a data service comprising an e-mail communication service.

4. The method of claim 1, further comprising:
wherein the act of identifying comprises receiving the indication based on data associated with the mobile station or the data service.

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5. The method of claim 1, further comprising:

wherein the act of identifying comprises receiving the indication from the mobile station through the wireless communication network.

30 6. The method of claim 1, further comprising:

wherein the act of identifying comprises receiving the indication from the mobile station through the wireless communication network in response to an input signal at a user interface of the mobile station.

5 7. The method of claim 1, further comprising:

 wherein the act of identifying the indication comprises identifying the always-on connection based on data associated with the data service.

 8. The method of claim 1, further comprising:

10 wherein the act of identifying the indication comprises identifying a relatively low data rate of the data service.

 9. The method of claim 1, further comprising:

15 wherein the act of identifying the indication comprises identifying a predetermined Quality of Service (QoS) associated with the data service.

 10. The method of claim 1, wherein the data service is one data service of a plurality of data services concurrently utilized by the mobile station.

20 11. A Radio Access Network (RAN) of a wireless communication network which is configured to control wireless network operations associated with a flow control process which terminates data communications to a mobile station based on an out-of-coverage condition between the mobile station and a wireless communication network, the RAN comprising:

25 a Packet Control Function (PCF) which communicates with a Packet Service Data Node (PDSN);

 the PCF being operative to identify an indication which indicates whether a mobile station utilizes an always-on connection for a data service provided through the wireless communication network;

the PCF being operative to cause the flow control process to be bypassed for the mobile station based on the indication indicating that the mobile station utilizes the always-on connection; and

the PCF being operative to otherwise cause the flow control process to be performed for the mobile station in connection with the PDSN.

12. The RAN of claim 11, wherein the always-on connection comprises a Point-to-Point Protocol (PPP) session.

13. The RAN of claim 11, wherein the always-on connection is utilized for a data service comprising an e-mail communication service.

14. The RAN of claim 11, further comprising:
wherein the PCF is operative to identify the indication by identifying the indication based on data associated with the mobile station or the data service.

15. The RAN of claim 11, further comprising:
wherein the PDSN is operative to identify the indication by receiving it from the mobile station through the wireless communication network.

16. The RAN of claim 11, further comprising:
wherein the PDSN is operative to identify the indication by receiving it from the mobile station through the wireless communication network in response to an input signal at a user interface of the mobile station.

17. The RAN of claim 11, further comprising:
wherein the PCF is operative to identify the indication by identifying the always-on connection based on data associated with the data service.

18. The RAN of claim 11, further comprising:

wherein the PCF is operative to identify the indication by identifying a relatively low data rate of the data service.

19. The RAN of claim 11, further comprising:

5 wherein the PCF is operative to identify the indication by identifying a predetermined Quality of Service (QoS) associated with the data service.

20. The RAN of claim 11, wherein the data service is one data service of a plurality of data services concurrently utilized by the mobile station.

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21. A Packet Service Data Node (PDSN) which communicates with a Packet Control Function (PCF) of a Radio Access Network (RAN), the PDSN being configured to control wireless network operations associated with a flow control process which terminates data communications to a mobile station based on an out-of-coverage condition between the mobile station and a wireless communication network, the PDSN being operative to:

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identify an indication which indicates whether a mobile station utilizes an always-on connection for a data service provided through the wireless communication network;

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cause the flow control process to be bypassed for the mobile station based on the indication indicating that the mobile station utilizes the always-on connection; and otherwise, cause the flow control process to be performed for the mobile station.

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22. The PDSN of claim 21, wherein the always-on connection comprises a Point-to-Point Protocol (PPP) session.

23. The PDSN of claim 21, being further configured to:

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prior to causing the flow control process to be performed or bypassed, receiving a request for the flow control process from the PCF.

24. The PDSN of claim 21, being further configured to:
identify the indication by identifying the indication based on data associated
with the mobile station or the data service.

5 25. The PDSN of claim 21, being further configured to:
wherein the PDSN is operative to identify the indication by receiving it from
the mobile station through the wireless communication network.

10 26. The PDSN of claim 21, being further configured to:
identify the indication by receiving it from the mobile station through the
wireless communication network in response to an input signal at a user interface of
the mobile station.

15 27. The PDSN of claim 21, being further configured to:
identify the indication by identifying the always-on connection based on data
associated with the data service.

20 28. The PDSN of claim 21, being further configured to:
identify the indication by identifying a relatively low data rate of the data
service.

25 29. The PDSN of claim 21, being further configured to:
identify the indication by identifying a predetermined Quality of Service
(QoS) associated with the data service.

30. The PDSN of claim 21, wherein the data service is one data service of
a plurality of data services concurrently utilized by the mobile station.